

**EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Shelly Shah on 8/20/08. The application has been amended as follows:

**AMENDMENTS TO THE CLAIMS**

1. (Currently amended) A hydrophilic microporous membrane comprising a thermoplastic resin, having been contacted with a hydrophilic vinyl monomer having one vinyl group after generation of radicals by irradiation with ionizing radiation in order to be subjected to hydrophilizing treatment by a graft polymerization reaction, and having a maximum pore size of 10 to 100 nm,

wherein said hydrophilic microporous membrane has a coarse structure layer with a higher open pore ratio and a fine structure layer with a lower open pore ratio which are formed in one piece, wherein said coarse structure layer exists on at least one side of the membrane surface and has a thickness of 2  $\mu\text{m}$  or more and a thickness of said fine structure layer is 50% or more of the whole membrane thickness,

wherein when 3 wt% bovine [immunoglobulin]immunoglobulin having a monomer ratio of 80 wt% or more is filtered at a constant pressure of 0.3 MPa, an average globulin permeation rate A (liter/m<sup>2</sup>/h) for 5 minutes from the start of filtration (~~briefly referred to as globulin permeation rate A~~) satisfies the following formula (1) and an average globulin permeation ~~filtration (permeation)~~ rate B (liter/m<sup>2</sup>/h) for 5 minutes from the time point of 55 minutes after the start of

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filtration (briefly referred to as globulin permeation rate B) satisfies the following formula (2):

Globulin permeation rate A > 0.0015 maximum pore size (nm)<sup>2.75</sup>

(1)

Globulin permeation rate B/globulin permeation rate A > 0.2

(2) .

2.-14. (Cancelled)

15. (Previously presented) The hydrophilic microporous membrane according to claim 1 having a maximum pore size of 10 to 70 nm.

16. (Previously presented) The hydrophilic microporous membrane according to claim 1 having a maximum pore size of 10 to 36 nm.

17. (Previously presented) The hydrophilic microporous membrane according to claim 1 having a receding contact angle of water of 0 to 20 degrees.

18. (Previously presented) The hydrophilic microporous membrane according to claim 15 having a receding contact angle of water of 0 to 20 degrees.

19. (Previously presented) The hydrophilic microporous membrane according to claim 16 having a receding contact angle of water of 0 to 20 degrees.

20. (Previously presented) The hydrophilic microporous membrane according to claim 1, wherein a logarithmic reduction value of porcine parvovirus at the time point by which 55 liter/m<sup>2</sup> has been permeated from the start of filtration is 3 or more.

21. (Previously presented) The hydrophilic microporous membrane according to claim 1, wherein both of a logarithmic reduction value of porcine

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parvovirus at the time point by which 5 liter/m<sup>2</sup> has been permeated from the start of filtration and a logarithmic reduction value of porcine parvovirus at the time point by which further 5 liter/m<sup>2</sup> has been permeated after 50 liter/m<sup>2</sup> is permeated are 3 or more.

22. (Previously presented) The hydrophilic microporous membrane according to claim 1, wherein an accumulated permeation volume in three hours after the start of filtration is 50 liter/m<sup>2</sup> or more when 3 wt% bovine immunoglobulin having a monomer ratio of 80 wt% or more is filtered at a constant pressure of 0.3 MPa.

23. (Previously presented) The hydrophilic microporous membrane according to claim 16, wherein an accumulated permeation volume in three hours after the start of filtration is 50 liter/m<sup>2</sup> or more when 3 wt% bovine immunoglobulin having a monomer ratio of 80 wt% or more is filtered at a constant pressure of 0.3 MPa.

24. (Previously presented) The hydrophilic microporous membrane according to claim 21, wherein an accumulated permeation volume in three hours after the start of filtration is 50 liter/m<sup>2</sup> or more when 3 wt% bovine immunoglobulin having a monomer ratio of 80 wt% or more is filtered at a constant pressure of 0.3 MPa.

25. (Cancelled)

26. (Currently amended) The hydrophilic microporous membrane according to claim [[25]] 1, wherein the thickness of the coarse structure layer is 3  $\mu$ m or more.

27. (Currently amended) The hydrophilic microporous membrane according to claim [[25]] 1, wherein the thickness of the coarse structure layer is 5  $\mu$ m or more.

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28. (Previously presented) The hydrophilic microporous membrane according to claim 1, wherein the thermoplastic resin is polyvinylidene fluoride.

29. (Previously presented) The hydrophilic microporous membrane according to claim 1, wherein the hydrophilizing treatment is a graft polymerization reaction of a hydrophilic vinyl monomer having one vinyl group to the surface of the pores of the hydrophilic microporous membrane.

30. (Previously presented) The hydrophilic microporous membrane according to claim 29, wherein the hydrophilic vinyl monomer contains a hydroxyl group.

31. (Previously presented) The hydrophilic microporous membrane according to claim 1, wherein the adsorption amount per 1 g of the membrane is 3 mg or less when dead-end filtration at a constant pressure of 0.3 MPa is performed using a 0.01 wt% bovine immunoglobulin solution and a filtrate of 50 liter/m<sup>2</sup> from the start of filtration is collected.

32. (Previously presented) A method for removing a virus from a liquid containing a physiologically active substance, comprising filtering the liquid through the hydrophilic microporous membrane according to claim 1.

Cancel claim 33.

### REASONS FOR ALLOWANCE

2. The following is an examiner's statement of reasons for allowance: claims 1, 15-24, 26-32 are allowed over the prior art of record. The O.T. Double patenting has been overcome by the Terminal Disclaimer filed on 7/18/08, which approved. Claim 1 is the only independent claim as has been amended to include the allowed membrane structural limitations in the parent patent 7,140,496, in addition of the membrane performance limitations. All the pending

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rejections are overcome by the amendments. The membrane in patent 7,284,668, of record, does not meet the limitations of the membrane of amended claim 1. Claims 25 and 33 are canceled by the attached Examiner's amendment as being redundant.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana M. Fortuna whose telephone number is (571) 272-1141. The examiner can normally be reached on 9:30-6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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